

REMARKS

A Final Office Action mailed February 4, 2004 has been reviewed and carefully considered. Claims 1-38 are pending in the application. Claims 1-4, 6, 23, 24, 26, 27, 29, 31, 32, 34, 35 and 37 are rejected. Claims 5, 7-22, 25, 28, 30, 33, 36, and 38 are objected to.

Applicants appreciate Examiner's indication of allowability of claims 5, 7-22, 25, 28, 30, 33, 36 and 38.

In paragraph 2 on page 2 of the Office Action, claims 1 and 2 were rejected to under § 102(b) over Marks et al. (U.S. Patent No. 5,790,775).

In paragraph 4 on page 3 of the Office Action, the claims 23, 24, 26-27, 29, 31, 32, 34-35, and 37 were rejected under § 102(a) over IBM's SCSI Command Reference manual.

In paragraph 16 on page 5 of the Office Action, claims 3, 4, and 6 were rejected under § 103(a) over Marks as applied to claim 1 above, and further in view of IBM's SCSI Command Reference manual.

Applicants respectfully traverse the §§ 102(a), (b) and 103(a) rejections. To establish a *prima facie* case for rejection under 35 U.S.C. § 102, all the claim limitations must be taught, disclosed or suggested by the cited reference. To establish a *prima facie* case for rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the cited prior art references, *see* M.P.E.P § 2143.01. In this instance, the requirements are not present and a *prima facie* rejection fails under 35 U.S.C. §§ 102 and 103(a) because the Office Action fails to cite a reference or references that teach, disclose or suggest all the claim limitations of Applicants' application.

Applicants' invention requires "providing access to a logical unit number of a shared storage system when a hardware failure occurs in a first of multiple input/output paths using a second of the multiple input/output paths" and requires at least "mapping open options of the operating system to SCSI persistent reserve commands to allow all of the multiple paths to register with the logical unit number of the shared storage system; and allowing the second of the multiple paths to access the logical unit number of the

shared storage system after obtaining a persistent reservation with the shared storage system.” The present invention uses SCSI-3 persistent reserve to provide multi-path I/O in a non-concurrent clustering path. Persistent reservations were first implemented in SCSI-3 applications.

Marks, unlike the instant application, focuses on SCSI and SCSI-2 applications. Marks states at column 4, lines 62-64, “[i]n the preferred embodiment, the host side SCSI bus 14 is a fast-wide, differential SCSI-2 bus and the device side SCSI bus 20 is an 8-bit, single-ended SCSI-2 bus.” Although Marks indicates that the invention is not limited to SCSI or SCSI-2 applications, Marks does not indicate that the invention includes persistent reservations. And as mentioned above, persistent reservations were first implemented in SCSI-3 applications. Thus, persistent reservations cannot be included in implementations set forth in Marks. Marks does not teach, disclose or suggest “mapping open options of the operating system to SCSI persistent reserve commands to allow all of the multiple paths to register with the logical unit number of the shared storage system,” from the instant application.

In the prior art SCSI and SCSI-2 applications reservation capabilities are available. However, Marks does not discuss any type of reservation, even those related to SCSI or SCSI-2 applications. Marks does not even teach, disclose or suggest more primitive reservations. Therefore, even related advancements in view of Marks cannot teach, disclose or suggest “mapping open options of the operating system to SCSI persistent reserve commands to allow all of the multiple paths to register with the logical unit number of the shared storage system.”

The instant application also requires, “*allowing* the second of the multiple paths to access the logical unit number of the shared storage system *after obtaining* a persistent reservation with the shared storage system,” (emphasis added). In order for the second path to be allowed to access the logical unit number (LUN) it must obtain a persistent reservation with the shared storage system.

Marks, in contrast, states at column 3, lines 19-23, “[i]f one of the storage controllers in the dual-active, redundant configuration fails, the surviving one of the storage controllers automatically assumes control of all the host side SCSI IDs and

subsequently responds to any requests directed to the preferred host side SCSI IDs and associated units of the failed controller.” Rather than allowing access to the LUN only after obtaining a persistent reservation, the storage controller in Marks automatically assumes control.

The instant application, at claim 23, focuses on “[a] method for supporting SCSI persistent reserve commands by a shared storage system,” and requires “processing reservation keys to identify registered hosts; and processing persistent reservation commands to control access by a host.”

The ISCRM, on the other hand, explains that “[a] key part of persistent reserve is an eight byte key registered by an initiator,” page 22, lines 1-4, and from this statement, the Office Action erroneously states that “processing reservation keys to identify registered hosts” from the present invention is taught. The ISCRM does not teach processing reservation keys. Rather, the ISCRM at page 22, lines 1-4 characterizes persistent reserve keys. However, ISCRM does not suggest what operations concerning reservation keys are performed. Thus, ISCRM fails to disclose, teach or suggest at least “processing reservation keys to identify registered hosts.”

Neither Marks nor the IBM ISCRM reference alone teach, disclose or suggest all of the limitations of Applicants’ application, thus the Section 102 rejections are improper and should be withdrawn. Because Marks and the IBM ISCRM reference in combination fail to teach, disclose or suggest all of the elements of claims in the instant application, the Section 103 rejection is improper. Accordingly, Applicants request that the Section 103 rejection be withdrawn.

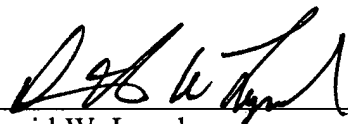
Dependent claims 2-22 and 24-38 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1 and 23. Further dependent claims 2-22 and 24-38 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-22 and 24-38 are patentable over the cited references.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicants, David W. Lynch, at 651-686-6633 Ext. 116.

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